

Personal Statement

A highly motivated engineering team leader who has worked in both Aviation and Motorsports. While working to win championships and create safe aircraft designs, I also participate in professional organizations to stay on the cutting edge of innovation and process control.

Technical Skills

Solidworks – CFD – ModelCenter – Microsoft Office – MATLAB – Python

Work History

Senior Design Engineer, December 2019 – Present

Pacific Aerospace Limited – We Fly Where Others Cannot

Responsibilities:

- Lead the Avionics Team through design and certification of new systems
- Communicate with third party suppliers to ensure designs and materials arrive on time and are at the expected quality
- **Execute Flight Test Scheduling, Logistics, and Risk Assessment for R&D, Production, and Certification**

Achievements:

- Ensured Flight Testing occurred ahead of schedule during critical design phase
- Led **certification** of avionics hardware integration by aircraft delivery deadline

Technical Specialist I (Systems Engineer) June 2017 – May 2019

Gulfstream Aerospace Corporation, Savannah, GA, USA

Gulfstream Aerospace Corporation creates the world's finest aviation experience with the most advanced business jet – the G500 and employs over 18,000 people.

Responsibilities:

- Executed Verification testing of aircraft systems
- Managed entry level employees to promote their development and lasting contribution

Achievements:

- **Mach 3 Award – Facilitated Human Factors testing in the G500 ITF**
- Mach 1 Award – Performed DCN testing to ensure certification deadline
- Performed testing that led to the FAA Type Certificate for the G500 in July 2018

Vehicle Aerodynamicist, May 2011 – June 2017

Corvid Technologies, Mooresville, NC, USA

Corvid Technologies is a leader in computational modeling with ~100 employees.

They are a defense contractor and also work with **Chevrolet Racing Teams**.

Responsibilities:

- Led Computational Simulation Team on-site at Hendrick Motorsports
- Performed aerodynamic and thermodynamic design, test and analysis using both **Linux and Microsoft** for Hendrick Motorsports race vehicles

Achievements:

- Achieved **39 race wins and 2 Championships** during my tenure
- Collaborated in the aerodynamic design of the **Chevy Camaro ZL1**, which took first qualifying position and won the checked flag at the **2018 Daytona 500**

Work History (continued)

Graduate Research Assistant, August 2009 – May 2011

Virginia Polytechnic and State University, Blacksburg, VA, USA

Virginia Tech is a world class engineering research institution with over 25,000 undergraduates. It has been consistently ranked as one of the top engineering schools in the United States.

Responsibilities:

- Contributed to NASA, NSF, and Boeing funded research project to aid a Multidisciplinary Design Optimization (MDO) code for a Truss Braced Wing Aircraft
- Assessed the ability of CFD to predict interference drag in the transonic regime and at high Reynolds number with computational resources and wind tunnel experiments

Achievements:

- Wrote Thesis based on interference drag results, satisfying Masters requirement
- Created conference paper presented at the AIAA Aviation Conference in 2011
- Published in Journal of Aircraft article, see Published Works below

Education

Masters of Science, Virginia Polytechnic and State University,
2011, Aerospace Engineering

Researched interference drag in the transonic regime at high Reynolds number.

Bachelors of Science, Virginia Polytechnic and State University,
2009, Aerospace Engineering

Undergraduate research with MURI Hypersonic Inlet (SCRAMJET Inlets)

Published Works

Kyle C. D. Knight, Eric M. Braun, Christopher J. Roy, Frank K. Lu, and Joseph A. Schetz. "Interference Drag Modeling and Experiments for a High-Reynolds-Number Transonic Wing", Journal of Aircraft, Vol. 49, No. 6 (2012), pp. 1894-1903., doi: 10.2514/1.C031731

Personal interests and activities

Hamilton Royal Aeronautical Society

- Presented a 45 minute non-technical talk on race car aerodynamics

Technical Committee Member for AIAA, Multidisciplinary Design Optimization Committee

- Presented an hour long presentation on Bluff Body Aerodynamics as an invited speaker to the AIAA Savannah Chapter
- Attended AIAA Aviation 2016 and 2018 Conferences